

**Description of courses which integrate cross-cutting issues relevant to
Gender, Environment and sustainability, Human values, Health
determinants, Right to Health and emerging demographic issues and
Professional Ethics into the Curriculum**

1. Name of the course: Anatomy

Professional ethics - Ethics on cadavers and Body donation:

Importance of biologic tissues and cadavers in their learning.

Demonstrate respect and follow the correct procedure when handling cadavers and other biologic tissues.

Emphasis that respect for donor families, cadavers and tissues is important.

Safe and clean handling and disposal of biologic tissues.

2. Name of the course: Physiology

Right to health – Basic life support:

Observe patient's vital parameters .

Demonstrate Basic Life Support in a simulated environment

3. Name of the course: Biochemistry

Environment and sustainability - Biomedical Waste Management:

Definition and classification of biomedical waste

Sources of biomedical waste, types

Susceptible population

Potential risks, health hazards from various types of wastes

Sensitisation of public regarding health care waste, treatment and disposal

Safe management of biomedical waste

Explain the current guidelines for biomedical waste disposal, colour coding

Health determinants - Nutrition and energy metabolisms:

Classification of nutrients with examples

Calorific value of food

Respiratory quotient (RQ) – definition, factors affecting, significance

Factors affecting energy requirement in an individual

Basal Metabolic Rate (BMR) – definition and its importance, factors affecting, normal value, measurement

Specific Dynamic Action (SDA) – definition, factors affecting, clinical significance

Physical activity - types and calories required

Recommended Dietary Allowance (RDA) - definition, RDA of various nutrients

Nutritional importance of Carbohydrates – Daily requirement, dietary fibre, glycemic index

Nutritional importance of Lipids – Daily requirement, essential fatty acids, trans fats, polyunsaturated fatty acids (PUFA), cholesterol

Nutritional importance of Proteins – Daily requirement, essential amino acids, nitrogen equilibrium, indices of protein quality

Nutritional indices

Protein energy malnutrition – definition, types, differences

Obesity – definition, indicators, grading, causes, consequences

Balanced diet

Biochemistry of starvation

Total Parenteral Nutrition (TPN)

Right to health and emerging demographic issues - Laboratory Glassware and Safety

Precautions:

List commonly used laboratory glassware and equipment

Describe precautions, good and safe laboratory practices

4. Name of the course: Pathology

Health determinants – Nutritional disorders:

Protein energy malnutrition: Marasmus, Kwashiorkor

Vitamins: Major functions

Vitamin deficiency disorders: classification with specific examples

Pathogenesis of obesity and its consequences

Professional ethics – Ethics in Laboratory Medicine

Organization and functioning of laboratories

Safety precautions to be taken in the laboratories

Ethical aspects of Pathology practice

Respect to patient's sample, correct labelling of sample, proper preservation, turn-around time

Professional ethics - Legal aspects of Autopsy

Autopsy – Definition, uses, types

Clinical and Medicolegal autopsies – Procedures and Legal requirements

5. Name of the course: Microbiology

Right to health and emerging demographic issues – Asepsis

Practice the techniques of asepsis, antisepsis and sterilization in day-to-day procedures and apply universal precautions in laboratory and clinical practice.

Prevention and control of communicable diseases in the community or hospital.

Ecology (microbial) of specialized areas like hospital, water, food and prevention of the possible spread of infections.

6. Name of the course: Pharmacology

Professional ethics - Ethics of drug prescription:

Communicate with the patient with empathy

Legal and ethical aspects of prescribing drugs

Adverse effects of drugs and drug dependence

Professional ethics - Ethics of research:

Drug trials

Guidelines for research on animals and human volunteers

7. Name of the course: Forensic Medicine

Gender:

PCPNDT act of 2002

Sex determination by amnioentesis

Medical termination of pregnancy act of 1971

Gender:

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Dowry deaths.

Virginity : Definition and signs. Defloration

Sexual Offences : Rape, Definition, examination of victim and the accused in case of rape, gang rape, custodial rape. Incest, Unnatural Offences - Tribalism, Bestiality, Buccal Coitus.

Sexual Perversions :- Sadism, Masochism, Transvestitism, Voyeurism, Indecent assault, Sodomy.

Legitimacy, paternity, disputed paternity, medicolegal significance of impotence.

Sterility and artificial insemination; super-foetation and super-fecundation; atavism; sterilization.

Pregnancy and delivery : Pregnancy : signs of pregnancy in the living and in the dead

Delivery : signs of recent and remote delivery in the living and in the dead

Abortion: natural and artificial therapeutic miscarriage; complications of abortion; investigation in deaths due to abortion.

Environment and sustainability - Biomedical Waste Management:

Types of biomedical waste

Potential risks with biomedical waste

Safe management of biomedical waste

The Biomedical Waste (Management & Handling) (Second Amendment) Rules 2000

Professional ethics - Etiquette, duties, rights, medical negligence and legal responsibilities of the physicians towards patient, profession, society, state and humanity at large.

Indian Medical Register rights and privileges of registered medical practitioner, penal erasure, infamous conduct, and disciplinary committee.

Code and law of medical ethics, unethical practice, dichotomy, consumer protection act

Professional secrecy, privileged communication.

Malpractice: civil, criminal and ethical.

Consent, medical negligence, vicarious liability, the doctrine of Res Ipsa Loquitur, contributor negligence.

Consumer protection act

Duties of a medical practitioner towards his patient and the society.

Human organ Transplantation act of 1994.

Acts relevant to torture

Euthanasia

Torture medicine

Human experimentation act

Workmen compensation act

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8. Name of the course: Community Medicine

Environment and sustainability - Pollution:

Problem in the disposal of refuse, sullage, human excreta and sewage and its remedies.

Air pollution:

Parts of the atmosphere

Types of air pollution

Causes of air pollution

How to reduce air pollution

Water pollution:

Concept of safe and wholesome water.

Requirements of sanitary sources of water.

Methods of purification of water on small scale and large scale.

Various biological standards, including WHO guidelines for third world countries.

Concept and methods for assessing quality of water.

Sources of water pollution

Innovations in water usage

Noise pollution:

Definition of noise

Why noise is pollution

Sources and properties of noise

Effects of noise exposure on health

Solutions for noise pollution

Radiation:

Concepts of radiation

Types of radiation

Permissible limits of radiation

Sources of radiation

Hazards to health

Prevention of hazards of radiation

Lighting and ventilation:

Concept of good lighting and ventilation

Ill effects of poor lighting and poor ventilation

Assessment effects of adequate lighting and ventilation

Standards of housing and the effect of poor housing on health

Environmental health and diseases:

Definition of occupational health
Concept and importance of ergonomics
Classification of major occupational hazards
Major occupational diseases
Pneumoconiosis – definition, agents causing, types, manifestations
Lead poisoning – definition, main features
Occupational cancer, occupational dermatitis, agricultural hazards and industrial accidents -
clinical features and preventive measures, sickness absenteeism
Prevention of environmental diseases

Environment and sustainability - Biomedical Waste Management:

Introduction to biomedical waste
Importance of biomedical waste
Types of biomedical waste
Potential risks of biomedical waste
Segregation of biomedical waste
Spill management
Disposal methods for biomedical waste
Occupational safety of health workers
Situation analysis of waste management in Indian context
Approaches, methods, merits and demerits of solid waste management
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Human values - Handicapped child:

Definition of handicap
Classification of handicapped children
Problems faced by handicapped children – health and social issues
Prevention of handicap in children
Welfare of handicapped children
Child abuse
Street children

Human values - Slum dwellers:

Definition of slum
Characteristics of slum
Causes of slum
Effects of slum
Health and non-health issues faced by the slum dwellers
Solutions for these problems

Health determinants – Health Education:

Principles of communication

Methods and evaluation of health education

Adult education methods.

Barriers to effective communication.

Various methods of health education with their advantages and disadvantages.

Selection and use of appropriate media (simple audio-visual) for effective health education.

Practice of Health Education.

Health determinants – Nutrition:

Common sources of various nutrients

Special nutritional requirement according to age, sex, activity, physiological condition.

Nutritional assessment of individual, families and the community by selection and using appropriate methods such as : anthropometry, clinical, dietary laboratory techniques.

Planning and recommendation of a suitable diet for individuals and families bearing in mind the local availability of foods economic status, etc.

Common nutritional disorders protein energy malnutrition. Vitamin A deficiency anemia, iodine deficiency diseases fluorosis, food toxin diseases and the control and management.

National programmes in nutrition.

Nutritional surveillance education and rehabilitation.

Health determinants – National Health Programs:

Justification of the need for national health programs

Difference between vertical and horizontal program

Enumerate the national health programmes currently implemented in our country

National Vector Borne Disease Control Program - Malaria control programme

Kala-azar, lymphatic filariasis, Japanese encephalitis, dengue and chikungunya control

National leprosy eradication programme

Revised National Tuberculosis Control Programme

National AIDS control programme

Reproductive and child health Programme

National blindness control program

National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS)

National Iodine Deficiency Disorders Control Programme (NIDDCP)

Community Nutritional Programme

National Rural Health Mission

Health determinants – Hygiene:

Evolution of concept of hygiene

Briefly explain germ theory of disease causation

Meaning of public health
Pioneers who have contributed to public health
Measures of health promotion in preventive medicine

Health determinants – Immunisation:

Differentiation between vaccination and immunization
Properties of live vaccines and killed vaccines
Different types of vaccines used
Immunoglobulins
Differentiation between cold chain and reverse cold chain
Properties of maintaining a cold chain system
Heat sensitive and light sensitive vaccines
Cold chain equipment
Open vial policy
National Immunization schedule
Common vaccine reactions
Immunization error related reactions, immunization anxiety related reactions and coincidental events
Investigation of AEFI clusters
Contraindications to vaccines

Health determinants – Geriatrics:

Definition of geriatrics
Classification of geriatric group
Health problems of the aged
Preventive health care in elderly

Right to Health - Pollution:

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Types of air pollution
Causes of air pollution
How to reduce air pollution

Water pollution:

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Requirements of sanitary sources of water.
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Various biological standards, including WHO guidelines for third world countries.

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Innovations in water usage

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Why noise is pollution
Sources and properties of noise
Effects of noise exposure on health
Solutions for noise pollution

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Types of radiation
Permissible limits of radiation
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Hazards to health
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Reproductive and child health Programme
National blindness control program
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Community Nutritional Programme
National Rural Health Mission

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Demography:

Definition of demography and family welfare program.

Stages of the demographic cycle and their impact on the population, concept of demographic gap and population explosion.

Age pyramid

Sex ratio, dependency ratio

Family size

Definition of demography

Definition of vital statistics

Sources of vital statistics in India – Vital registration, sample registration, census

Importance of vital indices in public health

Definition, calculation and interpretation of demographic indices - birth rate, death rate, fertility rates. Fertility related statistics.

Demographic trends in India - Reasons for rapid population growth in India and population dynamics.

Need for population control

Problems due to population increase

Measures for population control

National Population Policy

Birth control measures in India

9. Name of the course: Ophthalmology

Health determinants - National Programme for Control and Prevention of Blindness:

Introduction, problem statement of blindness in our country, preventable and avoidable blindness in our country

Evolution of the program

Objectives and strategies of the program

Role of District blindness control program

Organization, structure of the program

Indicators for monitoring and evaluation of the program



10. Name of the course: Otorhinolaryngology

Environment and sustainability - Biomedical Waste Management:

Types of biomedical waste
Potential risks with biomedical waste
Safe management of biomedical waste

11. Name of the course: General Medicine

Human values - Communication skills and counselling:

Role of effective communication in clinical practice
Communication and counselling of patient and family members

Health determinants – Geriatrics:

Biology of ageing
Consequences of ageing
Age-related changes
Principles of geriatrics
Comprehensive geriatric assessment
Physical examination in elderly
Functional assessment
Cognitive assessment
Nutritional assessment
Geriatric syndromes
Falls in the elderly
Incontinence in elderly
Delirium, memory impairment, depression, insomnia, constipation in the elderly

Professional ethics - Ethics in General Medicine:

Importance of ethics in current practice of medicine
Role of effective communication in clinical practice
Common ethical issues in practice
Communication and counselling of patient and family members



12. Name of the course: Pediatrics

Human values - Communication skills and counselling parents:

Empathy
Interpersonal communication skills
Counselling in ICU

Health determinants - National health programmes:

Important health programmes in India - ICDS, Maternal and Child Health (MCH),
Reproductive child health (RCH) CSSM, Integrated Management of Neonatal & Childhood
Illnesses (IMNCI)

Health determinants - Immunization:

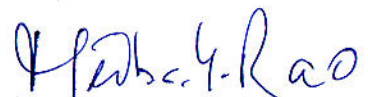
Differentiation between vaccination and immunization
Properties of live vaccines and killed vaccines
Different types of vaccines used
Immunoglobulins
Cold chain system
National Immunization schedule
Common vaccine reactions
Contraindications to vaccines

Health determinants - Nutrition:

Normal requirements of protein, carbohydrates, fat, minerals and vitamins for newborn,
children and pregnant and lactating mother
Common food sources of nutrients
Breast feeding – physiology of lactation, composition of breast milk, colostrum,
initiation and technique of feeding.
Characteristics and advantages of breast milk
Hazards and demerits of prelacteal feed, top milk and bottle feeding
Feeding of LBW babies.

Right to health and emerging demographic issues:

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Infant mortality rate
Perinatal mortality rate
Neonatal mortality rate
Birth rate
Fertility rate

13. Name of the course: General Surgery

Environment and sustainability - Biomedical Waste Management:

Types of biomedical waste
Potential risks with biomedical waste
Safe management of biomedical waste

Professional ethics - Ethics in General Surgery:

Maintenance of patient case records, Discharge summary
Maintenance of medico-legal register, accident register
Medical certificates
Issuing of wound certificate
Issuing of death certificate
Documents of Medical Certification of Cause of Death
Medicolegal reports

14. Name of the course: Obstetrics and Gynaecology

Gender - PCPNDT Act and other gender-related issues:

Definition of PCPNDT act
Components PCPNDT act
Registration of the act
Process of certification, renewal, prohibitions
Policy-making body and penalisation
Other gender-related issues, gender inequality
National Family Planning Program

Gender – Women's health and gender issues:

Issue of gender inequality
Various social and health problems associated with gender inequality
Remedial measures to improve women's social health status (MMR, Prevention of cancer cervix etc.)

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Infertile couple, male infertility

Right to health and emerging demographic issues:

Maternal mortality, steps to reduce maternal mortality rate

Vital statistics

Fertility rate

Perinatal and neonatal mortality – causes, how to reduce

Right to health and emerging demographic issues – Reproductive and Child Health (RCH) programme and safe motherhood:

Concept of Reproductive and child health (RCH)

Definition of reproductive health

Objectives of RCH program

Components and packages of services under RCH program

Safe motherhood components

Child survival components

Infrastructural facilities for delivery of RCH services and its monitoring

Indications of quality of care

Professional ethics - Ethics in OBG, Medicolegal aspects:

Definition of ethics

Types of ethics

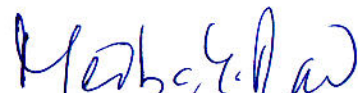
Basic ethical principles

Ethical dilemmas in day-to-day obstetric and gynecological practice

Ethical issues concerning HIV and AIDS

Code of medical ethics

Common medicolegal issues, their prevention and risk management in Obstetrics practice



Principal & Dean, RMC

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